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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/722,970 | 11/25/2003 | Douglas W. Babcock | A1W12376US | 9051 |

23935 7590 12/01/2005

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EXAMINER

NGUYEN, JIMMY

ART UNIT PAPER NUMBER

2829

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/722,970

Applicant(s)

BABCOCK ET AL.

Examiner

Jimmy Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 21 is/are pending in the application.
- 4a) Of the above claim(s) 11- 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1103_0604.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 1 -10 in the reply filed on 6/21/05 is acknowledged, however because of the applicant did not state the reason of traverse, therefore the election considers as non-traverse.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 – 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Iorga et al (US 6,642,707).

As to claims 1, 7, Iorga et al disclosed (fig 3) an automatic test equipment (ATE) bidirectional drive channel for transmitting test signals to a device under test (DUT) and receiving signals from the DUT, comprising:

an input/output line (34, 38) for connection to a DUT (33),
a driver circuit (32) connected to apply test signals to said input/output line (34, 38) for application to a DUT (33),

a receiver circuit (30) connected to said input/output line (34, 38) to receive signals produced by a DUT (33), said receiver circuit having an associated capacitance (C2), and
a first passive matching network (L1, C1) connected to said line to at least partially compensate for said receiver circuit capacitance (C2).

As to claim 2, Iorga et al disclosed (fig 3) first passive matching circuit (L1, C1) comprising a T coil circuit.

As to claims 3, 9, Iorga et al disclosed (fig 3) the ATE drive channel of claim 2, wherein said driver (32) and receiver (36) circuits are implemented on a common layer of an integrated circuit (IC), and said T-coil circuit (50) includes inductors (L1, L2) that are implemented in a separate layer of said IC that is spaced from said common layer by at least a dielectric layer.

As to claims 4, 10, Iorga et al disclosed (fig 3) the ATE drive channel of claim 3, further comprising a flip-chip bump having an associated redistribution layer at the same level as said T-coil inductors.

As to claim 5, Iorga et al disclosed (fig 3) the ATE drive channel of claim 1, said driver circuit comprising the combination of a current-mode driver (32, Vih) having an associated capacitance and a voltage mode driver, said receiver circuit comprising a

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comparator circuit (36) for comparing a signal received from a DUT (33) to a reference, further comprising a second passive matching network (C2, L2) connected in series with said first passive matching network (C2, L2) to at least partially compensate for said current-mode driver capacitance.

As to claims 6, 8, Iorga et al disclosed (fig 3) the ATE drive channel of claim 5, said first (C1, L1) and second (C2, L2) passive matching circuits comprising respective T-coil circuits.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Nguyen whose telephone number is 571-272-1965. The examiner can normally be reached on M - F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ramtez Nestor, can be reached on 571 -272 -2034. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jimmy Nguyen

11/27/05


VINH NGUYEN
PRIMARY EXAMINER
A-U-2829
11/28/05